

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **LISTING OF CLAIMS:**

1. (Currently Amended) A rotary transformer comprising:  
~~having~~ at least one primary winding and at least one secondary winding which  
~~can be configured to~~ move in rotary fashion with respect thereto, wherein:

[[•]] ~~wherein~~ the primary winding and the secondary winding are each  
divided into at least two separate winding sections, which interengage in the  
manner of a comb; and

[[•]] ~~these winding sections interengaging in the manner of a comb,~~

[[•]] ~~and~~ the winding sections are arranged such that the current flow of  
adjacent winding sections among the primary and secondary windings, which  
lie directly opposite one another so as to form an air gap between the  
adjacent winding sections, in each case being is in the opposite direction  
between the adjacent winding sections.

2. (Previously Presented) The rotary transformer as claimed in claim 1,  
wherein the winding sections extend parallel to the axis of rotation of the rotary  
transformer and are in the form of sleeves.

3. (Withdrawn) The rotary transformer as claimed in claim 1, wherein the winding sections extend perpendicularly with respect to the axis of rotation of the rotary transformer and are circular.

4. (Currently Amended) The rotary transformer as claimed in claim 1, ~~wherein comprising:~~

two core halves which ~~are provided which can configured to~~ move in rotary fashion with respect to one another and form at least one annular cutout for ~~the purpose of~~ accommodating the primary winding and the secondary winding.

5. (Currently Amended) The rotary transformer as claimed in claim 4, wherein the two core halves are designed to be essentially symmetrical, and each core half comprises a base plate having (i) an integrally formed outer ring and (ii) an integrally formed inner cylinder or an integrally formed inner ring.

6. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 5, wherein the base plates ~~are provided with~~ include at least one integrally formed intermediate ring ~~in order thus to~~ provide more than one annular cutout.

7. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 4, wherein the first core half includes has a base plate having an integrally formed inner cylinder or inner ring, and the second core half ~~has~~ includes a base plate having an integrally formed outer ring.

8. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 5, comprising:

circular wining supports which are mounted on the inner sides of the base plates,

wherein the individual winding sections are fixed in the circular winding supports, ~~which are mounted on the inner sides of the base plates.~~

9. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 5, comprising:

sleeve-shaped winding supports which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring,

wherein the individual winding sections are fixed in the sleeve-shaped winding supports, ~~which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring.~~

10. (Withdrawn) The rotary transformer as claimed in claim 8, wherein the electrical connections between the individual winding sections run in the winding supports.

11. (Currently Amended) The rotary transformer as claimed in claim 1, wherein winding terminations are passed to ~~the outside~~ the rotary transformer via corresponding openings in the base plates.

12. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 1, wherein ~~a~~ at least one of the winding sections comprises a single turn.

13. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 1, wherein ~~a~~ at least one of winding sections comprises a plurality of turns.

14. (Currently Amended) The rotary transformer as claimed in claim 4, wherein ~~in each case one~~ central hole is respectively provided in each one of the core halves.

15. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 2, comprising:

~~wherein two~~ core halves which are ~~provided which can~~ configured to move in rotary fashion with respect to one another and form at least one annular cutout for ~~the purpose of~~ accommodating the primary winding and the secondary winding.

16. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 3, comprising:

~~wherein two~~ core halves which are ~~provided which can~~ configured to move in rotary fashion with respect to one another and form at least one annular cutout for ~~the purpose of~~ accommodating the primary winding and the secondary winding.

17. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 6, comprising:

circular wining supports which are mounted on the inner sides of the base plates,

wherein the individual winding sections are fixed in the circular winding supports, ~~which are mounted on the inner sides of the base plates.~~

18. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 7, comprising:

circular wining supports which are mounted on the inner sides of the base plates,

wherein the individual winding sections are fixed in the circular winding supports, ~~which are mounted on the inner sides of the base plates.~~

19. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 6, comprising:

sleeve-shaped winding supports which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring,

wherein the individual winding sections are fixed in the sleeve-shaped winding supports, ~~which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring.~~

20. (Withdrawn – Currently Amended) The rotary transformer as claimed in claim 7, comprising:

sleeve-shaped winding supports which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring,

wherein the individual winding sections are fixed in the sleeve-shaped winding supports, ~~which are mounted on the outer side of the inner cylinder or inner ring and on the inner side of the outer ring.~~